Direct proportion

$y \propto x$ just means 'y is directly proportional to x'. This can also be written as $y = kx$ or sometimes as 'y varies as x'

(1) y is proportional to x. (a) Write an equation connecting y and x (b) Find the value of k, the constant of proportionality and (c) Complete the table below.

x	5	25		100
y	1		10	

(2) $y \propto x$. Find the constant of proportionality and complete the table below.

x	20	100		500
y		20	50	

(3) y varies with x. Complete the table below

x			100	200
y	30	60	300	

(4) y is directly proportional to x. When y is 8, x is 2. Find y when x is 3 and find x when y is 20.

(5) $s \propto t$. When s is 3, t is 24. Find s when t is 50 and find t when s is 90.

(6) y is directly proportional to x^2. When y is 8, x is 2. Find y when x is 3 and find x when y is 72

(7) $y \propto \sqrt{x}$. y is 10 when x is 4. Find the constant of proportionality. Now find y when x is 100 and find x when y is 30

(8) The cost of a rug is directly proportional to the size of the rug. (a) Write a basic formula connecting the 2. When the rug is $2m^2$ the cost is £100. (b) Find the value of k in your equation. (c) Find the cost of a rug that is $8m^2$ and find the size of a rug that costs £500.

Direct proportion

$y \propto x$ just means 'y is directly proportional to x'. This can also be written as $y = kx$ or sometimes as 'y varies as x'

(1) y is proportional to x. (a) Write an equation connecting y and x (b) Find the value of k, the constant of proportionality and (c) Complete the table below.

x	5	25		100
y	1		10	

(2) $y \propto x$. Find the constant of proportionality and complete the table below.

x	20	100		500
y		20	50	

(3) y varies with x. Complete the table below

x			100	200
y	30	60	300	

(4) y is directly proportional to x. When y is 8, x is 2. Find y when x is 3 and find x when y is 20.

(5) $s \propto t$. When s is 3, t is 24. Find s when t is 50 and find t when s is 90.

(6) y is directly proportional to x^2. When y is 8, x is 2. Find y when x is 3 and find x when y is 72

(7) $y \propto \sqrt{x}$. y is 10 when x is 4. Find the constant of proportionality. Now find y when x is 100 and find x when y is 30

(8) The cost of a rug is directly proportional to the size of the rug. (a) Write a basic formula connecting the 2. When the rug is $2m^2$ the cost is £100. (b) Find the value of k in your equation. (c) Find the cost of a rug that is $8m^2$ and find the size of a rug that costs £500.

Direct proportion

$y \propto x$ just means 'y is directly proportional to x'. This can also be written as $y = kx$ or sometimes as 'y varies as x'

(1) y is proportional to x. (a) Write an equation connecting y and x (b) Find the value of k, the constant of proportionality and (c) Complete the table below.

x	5	25		100
y	1		10	

(2) $y \propto x$. Find the constant of proportionality and complete the table below.

x	20	100		500
y		20	50	

(3) y varies with x. Complete the table below

x			100	200
y	30	60	300	

(4) y is directly proportional to x. When y is 8, x is 2. Find y when x is 3 and find x when y is 20.

(5) $s \propto t$. When s is 3, t is 24. Find s when t is 50 and find t when s is 90.

(6) y is directly proportional to x^2. When y is 8, x is 2. Find y when x is 3 and find x when y is 72

(7) $y \propto \sqrt{x}$. y is 10 when x is 4. Find the constant of proportionality. Now find y when x is 100 and find x when y is 30

(8) The cost of a rug is directly proportional to the size of the rug. (a) Write a basic formula connecting the 2. When the rug is $2m^2$ the cost is £100. (b) Find the value of k in your equation. (c) Find the cost of a rug that is $8m^2$ and find the size of a rug that costs £500.